United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine

Confirmatory Policy for Suspect Potato Cyst Nematodes

(Appendix 5 in the U.S.-Canada Guidelines)

Introduction:

This policy is specific to PCN and is based on knowledge about the biology and epidemiology of the organism.

Specimens must be identified and confirmed by an NPPO or NPPO-approved laboratory using definitive morphological/morphometric and molecular identification techniques, including those specimens originating from a non-NPPO or non-NPPO-approved laboratory. If the pest is confirmed, regulatory action may result.

Subsequent samples from a field with at least one confirmed positive sample do not require confirmatory testing. If the suspect sample is not an official sample, the collection of an official sample may be required.

Morphological and Molecular Confirmation:

Complete, definitive identification of *G. pallida* or *G. rostochiensis* is a multi-step process, as follows:

1. Read/sort soil extracts and remove anything resembling a cyst.
2. Examine structures resembling cysts. This must be done by trained individuals who can conclude there is a reasonable probability that the removed bodies are spherical nematode cysts.
3. Verify that the sample contains suspect *Globodera* spp. or other cyst nematode genera (such as *Cactodera*).
4. Verify that the suspect cysts and/or any juvenile forms have key characters and are morphometrically within the range of the PCN species.
5. Verify that the suspect nematode tissue yields DNA identifiable as a PCN species.
6. Verify that the morphological and molecular analyses concur.

Infested Field Confirmation:

For a field to be considered infested with PCN, the following criteria should be met:

- at least two cysts from two different soil samples with one of those cysts containing viable PCN eggs or juveniles.

If only one sample yields suspect cyst(s) or no viable eggs or juveniles are detected, a follow-up survey of the suspect field, at a minimum of Method A, is required to determine whether the field is infested. If no PCN cysts are detected in samples from the follow-up survey at Method A, then a second follow-up survey at Method A is required to determine whether the field is infested. Fields should be cultivated between surveys.

Conclusion:

Fields that do not meet the terms of this policy will not be considered as infested.